

ABSTRACT OF THE DISCLOSURE

The present invention provides a method for absorbing and releasing hydrogen which comprises applying repeatedly hydrogen pressurization and depressurization to a hydrogen storage metal alloy of a body-centered cubic structure-type phase exerting a two-stage or inclined plateau characteristic in a hydrogen storage amount vs hydrogen pressure relation in an appropriate fashion to absorb and release hydrogen, and at least at one stage during the release of hydrogen, making the temperature (T_2) of the above-mentioned hydrogen storage metal alloy higher than the temperature (T_1) of the hydrogen storage metal alloy during the hydrogen absorption process ($T_2 > T_1$), thereby enabling the release and utilization of occluded hydrogen at a low-pressure plateau region or an inclined plateau lower region, which has not been utilized in the prior art. Refer to FIG. 16.